

SHAPING TOMORROW

3D printing and its impact on IP

13-16 July 2020 | Digital conference



Learn with the experts

Whether you are an established global player or a lean start-up, our digital gathering will bring you up to speed on the latest IP developments in additive manufacturing.

For your convenience, the event programme has been spread across four days. There is no registration fee and you can choose if you would like to attend one, some or all sessions.

EPO Chief Economist Yann Ménière will also present the findings of the EPO's soon-to-be-published landscaping study, which reveals a surge of innovation in 3D printing across multiple industry areas.

Foreword: António Campinos



While global supply chains have proven unexpectedly fragile in recent months, technological innovation has provided unforeseen solutions. So it is fitting that the first major conference co-hosted by the European Patent Office (EPO) and European Union Intellectual Property Office (EUIPO) should focus on a topic that is at the cutting edge of the Fourth Industrial Revolution.

Additive manufacturing (AM) – more commonly known as 3D printing – is taking off in countless industries. All around the world, it is also contributing locally to keeping health services running, including through the 3D printing of valves for ventilators that can save the lives of the hardest hit COVID-19 patients.

The programme reflects the times in which we live and simultaneously seeks to shape them by fostering sustainable innovation and growth. We will see how the democratisation of manufacturing can touch our lives in all sorts of ways, as mass customisation becomes the new norm.

However, AM technology also throws up significant challenges, particularly with regard to the digital files that make AM so agile. As conventional materials,

products and processes are displaced, a holistic approach to intellectual property (IP) rights and the harmonisation of standards are more important than ever.

Our digital conference provides a platform for policy-makers, investors, inventors, SMEs, academics and IP professionals to exchange views and share expertise. It is one of several initiatives aimed at giving all IP rights holders – from established global players to lean start-ups – access to the tools and knowledge required to grow their businesses in an era of digital transformation.

The conference will also see the launch of the EPO Chief Economist's study on the AM landscape, highlighting emerging patent trends and offering analysis of their implications. There will be much to discover this week and long into the future about the potential of this cutting-edge technology.

A handwritten signature in black ink that reads "António Campinos". The signature is fluid and cursive, with a large initial 'A'.

António Campinos
President, EPO

Foreword: Christian Archambeau



Whereas just a few decades ago 3D printing was a novelty, major companies are now designing factories around the concept of additive manufacturing in combination with advanced computer technologies including machine learning or artificial intelligence. This trend has profound consequences for the workplace and also for global supply chains since it offers the potential for a greater number of regional or community based production centres that are closely connected to local markets.

It also presents challenges for the protection of intellectual property rights as the value equation shifts from finished products in favour of the design and manufacturing instructions.

This means that IPRs will need to continue to evolve in order to make sure that they perform their traditional role of encouraging innovation, creativity and social advance by ensuring that those who have invested time and money are able to profit from their efforts.

The EUIPO's next strategic plan, Strategic Plan 2025, which gets under way in July this year, is built on a

vision of delivering "IP value for businesses and citizens in Europe". To achieve this aim means building wider partnerships in all the areas where we can deliver synergies. The EUIPO is, therefore, delighted to be joining with the EPO in organising this ground-breaking event as part of our wider cooperation.

A key goal must be to engage in an even wider and more constructive dialogue with institutional stakeholders, IP professionals, large companies and SMEs, e-commerce marketplaces, academics and citizens.

This conference is an excellent opportunity to do just that in an area of technology where change is happening fast and what once would have been regarded as science fiction, is becoming everyday reality.

A handwritten signature in black ink, appearing to read 'A. Archambeau', with a long horizontal flourish extending to the right.

Christian Archambeau
Executive Director, EUIPO

New synergies

A holistic approach to IP in the age of additive manufacturing

The promise that AM holds is genuinely multifaceted. AM speeds up product development and substantially reduces lead times. The on-site and on-demand additive manufacture of products democratises production and radically reduces waste as well as transportation and storage costs. Mass customisation will soon be here to stay. However, as the ease with which it is achieved increases, associated infringement issues become more pressing, as do other challenges and blind spots.

Therefore, new AM technologies necessitate a holistic approach to IP and the bundling of IP rights. Timing will play a crucial role in this regard: over the past five years, the number of patent applications related to AM has grown substantially.

It may take time to establish proof of concept and ensure that applications of AM yield products of the same or better quality than those manufactured using conventional techniques. However, while today the sector is estimated to be worth tens of billions of dollars, there is consensus among analysts that it will be worth hundreds of billions in the coming decades.

AM has a particularly well-established profile in medical and dental, power and energy, transportation, aerospace and automotive sectors – in which the majority of top applicants work. It is also starting to take off in some consumer markets such as architecture, footwear and eyewear. Moreover, AM is a steadily emerging technology in fashion, textiles, food and printed electronics sectors. Perhaps most importantly, AM contributes to connecting these different disciplines with each other, making for a truly interdisciplinary space. EPO and EUIPO experts, data and systems all help to document these developments so that business strategies can be tailored accordingly.

There can be no doubt about it: AM is taking off. Although it has traditionally been focused on plastics, there is now more innovation than ever relating to metals and alloys.

The potential for growth remains enormous, including in biomaterials and ceramics. And the sky is no longer the limit either. AM is just as likely to shape tomorrow's space exploration as it is to produce tomorrow's social housing, toys and bicycle frames, pharmaceutical products or life-saving heart implants.

Together, the EPO and EUIPO want to help you better understand and meet the challenges posed by AM.

Programme

13 July 2020

Event moderator:

Roberta Romano-Götsch, Chief Operating Officer, Healthcare, Biotechnology & Chemistry, EPO

10.00 hrs Welcome to the manufacturing revolution

Deepening collaboration, facilitating innovation and growth

António Campinos, President of the EPO

in conversation with

Christian Archambeau, Executive Director of the EUIPO

10.15 hrs Taking stock

In 1983, Chuck Hull used epoxy resin in thin laminated layers, one on top of the other, and etched their shape with ultraviolet light: the electrolytic 3D printer was born. Today, every 3D printer works on the basis of his idea. Chuck provides a rare personal glimpse into how he expects the industry to continue shaping tomorrow.

Charles W. Hull, Co-founder, Executive Vice President and CTO, 3D Systems

10.30 hrs The 3D printing IP landscape

EPO data helps inventors, investors and policymakers define their business and patent strategies in this booming field.

Yann Ménière, Chief Economist, EPO

11.00 hrs Q&A

14 July 2020

Event moderator:

*Roberta Romano-Götsch, Chief Operating Officer, Healthcare,
Biotechnology & Chemistry, EPO*

**16.00 hrs The impact of 3D printing/AM on IP rights
Will infringement ever be the same again?**

In the age of AM and the digitisation of industry, strategies for protecting innovation will have to change dramatically. Knowing exactly how to navigate the new terrain will be crucial to business success.

Thomas Prock, patent attorney, Marks & Clerk

16.15 hrs Panel discussion

3D printing/AM: challenges for the IP system

Every disruptive technology unleashes new potential and poses new challenges. At the same time as enabling innovation, could AM also lead to more instances of infringement and litigation? Clearly, any understanding of the implications of AM will benefit from systemic, legal, corporate and scholarly insights.

Chair:

Grant Philpott, Chief Operating Officer, Mobility & Mechatronics, EPO

Panellists:

Rosa Maria Ballardini, Associate Professor, University of Lapland

Virginie Fossoul, DG GROW, European Commission

Heli Pihlajamaa, Director of Patent Law, EPO

Thomas Prock, patent attorney, Marks & Clerk

Stephan Wolke, Head of Corporate Intellectual Property, thyssenkrupp

17.00 hrs Q&A

15 July 2020

Event moderator:

Roberta Romano-Götsch, Chief Operating Officer, Healthcare, Biotechnology & Chemistry, EPO

**16.00 hrs Expert insights into AM practice, start-ups and IP strategy
On safeguarding innovation**

Breaking into the conservative industry of security keys would not have been possible for the founders of UrbanAlps without IP rights. The company's CEO and co-founder **Alejandro Ojeda** explains how, crucially, its patents helped to secure the company its initial financing. Trade mark and design rights have since been added to the mix. The firm is currently looking to strategically protect its manufacturing processes.

16.15 hrs Panel discussion

Bringing inventors and investors together: the role of IP portfolios in creating funding and growth opportunities for SMEs and start-ups

As AM is integrated into existing manufacturing workflows, it will revolutionise how goods are developed, created and sourced. Meanwhile, potential investors and business partners, whether public or private, are constantly looking to identify high-growth firms early on. Could IP rights help create unique opportunities for these firms?

Chair:

Nicolas Vigneron, Head of Customer Engagement Service, Customer Department, EUIPO

Panellists:

Shiva Dustdar, Head of Division, Innovation Finance Advisory, European Investment Bank

Richard Gaignon, CEO, 3DCeram

Arno Held, Chief Venture Officer, AM Ventures Holding

Alejandro Ojeda, CEO, UrbanAlps

Alexandros Papaderos, Head of Patents and Licenses, Technical University of Munich

17.00 hrs Q&A

16 July 2020

16.00 hrs **All change in a time of disruptive technology: what's next for AM and IP?**
Most debates about the future are less concerned with what will happen than when it will happen. Fostering and protecting rapid innovation is all about timing. As business, technology and IP co-evolve, inventors and investors alike must be aware of what they themselves can change within the innovation ecosystem if they wish to be able to play their strongest hand.

Patrick Dixon, founder and Chairman, Global Change

16.45 hrs **Q&A**

17.00 hrs **AM innovation and the race against COVID-19**
In the midst of the current global health crisis, the emergency onsite use of AM technologies has helped save lives where the coronavirus has hit hardest. Cristian Fracassi is at the forefront of some of the latest efforts to push the boundaries of AM innovation in areas where the stakes could not be higher.

Cristian Fracassi, CEO and founder, Isinnova

17.15 hrs **Outlook**

Razik Menidjel, Chief Operating Officer, Information & Communications Technology, EPO



Speakers' profiles



Rosa Maria Ballardini

Associate Professor and Vice Dean (research), Faculty of Law, University of Lapland

Rosa Maria Ballardini has researched and taught IP law at various universities since 2005. She focuses on the interface between law and technology; current topics include sustainability and social innovation models. She holds a PhD from Hanken School of Economics, an LLM in IT and IP law from the University of Edinburgh, and a law degree from the University of Brescia. Granted the title of Docent (Docentti) in Intellectual Property Law by the University of Helsinki in 2017, Rosa was previously a Visiting Scholar at UC Berkeley/Boalt Hall.



Patrick Dixon

Founder and Chairman, Global Change

Patrick Dixon is founder and Chairman of Global Change, a growth strategy and forecasting company. He has worked with over 400 of the world's largest firms, including Google, Microsoft and IBM. Patrick founded an IT start-up while still studying medicine and acted as a consultant throughout his medical career. In 1988, he published the first of his 16 books, *The Truth about AIDS*, and established ACET, an agency focused on AIDS care and prevention. Patrick has delivered keynote addresses in over 60 countries.



Shiva Dustdar

Head of Innovation Finance Advisory Division, European Investment Bank

Shiva Dustdar joined the EIB in 2003 and currently heads up its Innovation Finance Advisory division. She was previously Director of High Yield at Fitch Rating Agency and has also worked in the M&A Advisory and Emerging Markets Investment Banking Group at J.P. Morgan in New York and London. In 2000, Shiva co-founded the European High Yield Association (EHYA), and in 2006 Credit Magazine identified her as one of the Top 50 Women in Credit. Shiva holds a BA in economics from Columbia University and an Executive MBA from London Business School (LBS).



Virginie Fossoul

Policy and legal officer, DG GROW, European Commission

Virginie Fossoul is a policy and legal officer in the European Commission's Intellectual Property and Fight against Counterfeiting unit (Directorate-General GROW). Before joining DG GROW, she worked in the Copyright unit (DG CONNECT), where she worked on the Directive on Copyright in the Digital Single Market. Previously, she worked as an IP lawyer at a Brussels-based law firm and as a researcher at Brussels University (ULB).



Cristian Fracassi

CEO and founder, Isinnova

Cristian Fracassi is the CEO and founder of Isinnova, a research and development agency based in Brescia, northern Italy. In addition to investing in stand-alone innovation projects, Isinnova helps recruit R&D engineers for firms looking to develop new products or production processes. Cristian founded the high-growth company five years ago after training as a structural engineer and architect. He has a PhD in materials engineering and a master's degree in economics.



Arno Held

Chief Venture Officer, AM Ventures Holding

Arno Held has more than 15 years' experience in industrial laser applications and additive manufacturing. For seven of those, he worked in strategy and business development for EOS, the world-leading provider of industrial AM technology. In 2015, Arno – together with Johann Oberhofer – started AM Ventures, a venture capital firm geared towards supporting start-ups that are focused on industrial AM hardware, software, materials and applications. The firm provides unique access to funding, technology and world-leading AM expertise. Today, the team manages a portfolio of 18 companies in seven countries. Arno studied industrial engineering and management in Karlsruhe, Shanghai and St. Gallen.



Richard Gaignon

CEO, 3DCeram

Richard Gaignon graduated with a degree in ceramic engineering from ENSCI in France and with an MBA from HEC Paris. Formerly General Manager of Ceric, an engineering company specialising in the production of heavy clay building materials, he became CEO of 3DCeram in 2009. He was President of EuTeCer, the European Technical Ceramics Federation, from 2016 to 2018.



Charles W. Hull

Co-founder, Executive Vice President and CTO, 3D Systems

Chuck Hull is the inventor of stereolithography, the first commercial 3D printing technology. With the founding of 3D Systems in 1986, he initiated the 3D printing industry and continues to lead it today with cutting edge innovations ranging from state-of-the-art production 3D printers to precision healthcare and medical 3D printing solutions, on-demand parts manufacturing services and digital design tools. Chuck is listed as inventor on over 100 patents worldwide and was inducted into the National Inventors Hall of Fame in the US in 2014, the same year he won the European Inventor Award in the category Non-European countries.



Razik Menidjel

Chief Operating Officer, Information & Communications Technology, EPO

Razik Menidjel was appointed the EPO's Chief Operating Officer, Sector Information & Communications Technology, in December 2019. He joined the EPO as a patent examiner in 1999 and later became a director in the Industrial Chemistry cluster. In 2015, Razik took up post as Head of VP 1 Office. He then went on to become Special Advisor to the President in 2018. Razik holds a PhD in organic chemistry from the Georg-August Universität in Göttingen (Germany), and a Master's degree in physics and in chemistry from the Université Louis-Pasteur in Strasbourg (France).



Alejandro Ojeda

CEO and co-founder, UrbanAlps

Alejandro Ojeda is co-founder and CEO of the security firm UrbanAlps, which uses AM to produce mechanical keys, cylinder and padlock applications for commercial and governmental clients worldwide. He holds a PhD from the Swiss Federal Institute of Technology (ETH Zurich) and MScs from Oxford Brookes University and Universidad de Las Palmas de Gran Canaria.



Alexandros Papaderos

Deputy Head of the Office for Research and Innovation, Technical University of Munich (TUM); Head of TUM Patents and Licenses

Alexandros Papaderos is responsible for the innovation and technology transfer activities at TUM. He has more than 19 years of experience in the fields of protection and commercial exploitation of research results, collaboration between academia and business and university entrepreneurship. Alexandros's track record includes numerous IP commercialisation cases, negotiation and conclusion of research collaboration contracts with academic and industrial partners as well as a broad portfolio of creation of university start-ups and spin-offs. He is a member of the Committee for Research, Technology and Innovation of the Bavarian Industry Association (vbw) and the TTO Advisory Group of the EPO.



Yann Ménière

Chief Economist, EPO

Yann Ménière joined the EPO as Chief Economist in February 2016. He was previously a professor of economics at MINES ParisTech, and also lectured on the economics of IP at Imperial College London, the Université catholique de Louvain (Belgium) and CEIPI. His research and expertise relate to the economics of innovation, competition and IP.



Grant Philpott

Chief Operating Officer, Mobility & Mechatronics , EPO

Grant Philpott is the EPO's Chief Operating Officer in the Mobility and Mechatronics sector, with responsibility for a broad range of technologies from the automotive and aerospace industries through to AM, consumer goods, construction and wearables. In short, the "Things" of IoT. During his 31 years at the EPO, he was previously COO in the ICT sector, where he was at the forefront of ensuring the EPO's stable and predictable approach to software patenting. Grant is also a member of the EPO's senior management committee headed by the President of the EPO.



Heli Pihlajamaa

Director of Patent Law, EPO

Heli Pihlajamaa has assisted extensively with EPO policy by developing, strengthening and promoting the EPC, including proposals for legal changes, compliance of operations with patent law-related norms and case law. She also advises senior EPO management on policy issues and legal amendments. Before joining the EPO, she worked in both the private and public sectors in Finland.



Thomas Prock

Partner, German and European patent attorney, Marks & Clerk

Thomas Prock advises clients in technology-driven fields, particularly in the electronics sector, and in internet-related matters, as well as in computer-implemented and mobile telecommunication inventions. With an active interest in the effects of 3D printing on IP portfolios, Thomas and his team advise clients on protecting tangible inventions, whether designed for 3D printing or traditional manufacturing. Having qualified as a UK and European patent attorney, in 2014 Thomas became one of the few professionals to also qualify as a German patent attorney.



Roberta Romano-Götsch

Chief Operating Officer, Healthcare, Biotechnology & Chemistry, EPO

Roberta Romano-Götsch, as Chief Operating Officer of one of the three technical sectors at the EPO, is responsible for leading over 1 600 staff (patent examiners, managers and formalities and administrative staff) in Munich and The Hague. She is also chair of the EPO's Operational Quality Committee. Roberta has a strong background in industrial chemistry, having obtained her PhD in organic chemistry from the Technical University of Munich and worked at Procter & Gamble before joining the EPO in 1997.



Nicolas Vigneron

Head of Customer Engagement Service, Customer Department, EUIPO

Nicolas Vigneron graduated in private law (LLM, University of Poitiers (France), and holds a postgraduate degree (DESS) in law and communication. He also holds an Executive Master's in marketing management from ESADE Business School.

Nicolas joined the EUIPO in 2000 and has experience in technical co-operation, external relations, online solutions and project and programme management.



Stephan Wolke

Head of Corporate Intellectual Property, thyssenkrupp, and CEO, thyssenkrupp Intellectual Property GmbH

Stephan Wolke studied at Bonn University and graduated with a PhD in physics. He began his professional career at McKinsey & Company, later held various positions at Bayer AG and Danaher Corp, and joined thyssenkrupp in 2011. Stephan is also a member of the Supervisory Board of the EPO's European Patent Academy as well as of IP working groups at the Federation of German Industries and the German Association of the Automotive Industry. He chairs a further IP working group at the Mechanical Engineering Industry Association, lectures on IP at several universities and is co-author of the new German national standard (DIN) 77006 for quality in IP management.

Your hosts



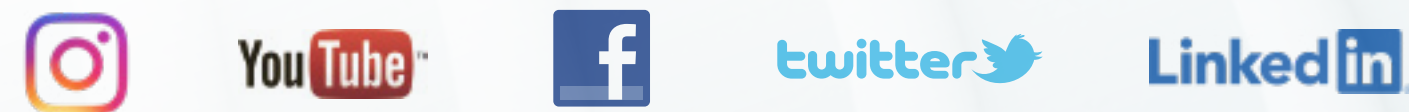
The European Patent Office (EPO) examines European patent applications, enabling inventors, researchers and companies from around the world to obtain protection for their inventions in up to 44 countries through a centralised and uniform procedure that requires just one application.

epo.org



The EUIPO is a decentralised agency of the EU based in Alicante, Spain. It manages the registration of the European Union trade mark (EUTM) and the registered Community design (RCD), both of which provide intellectual property protection in all EU Member States. The EUIPO also carries out cooperation activities with the national and regional intellectual property offices of the EU.

euipo.eu



Information

Attendance is free of charge but registration is required. You can choose if you would like to attend one, some or all sessions.

Daily sessions take place as follows:

13 July 10.00-11.15 hrs (CEST)

14 July 16.00-17.15 hrs (CEST)

15 July 16.00-17.15 hrs (CEST)

16 July 16.00-17.30 hrs (CEST)

Register here

epo.org/3d-printing

Event language

The conference will be held in English.

#IPin3Dprinting